

REMARKS

The Examiner's comments together with the cited references have been carefully studied. Favorable reconsideration in view of the foregoing amendments and following remarks is respectfully requested.

Claims 1-14 were previously pending in the application. Claims 1-14 have been rejected. Claims 1, 2, and 4 are herewith amended. Claims 3 and 8 have been canceled. New claim 15 has been added. Claims presently active are, therefore, claims 1, 2, 4 to 7 and 9 to 15. Favorable reconsideration of the application in view of the following remarks is respectfully requested.

Applicants herewith file a terminal disclaimer in compliance with 37 CFR §1.321(c) to overcome provisional double patenting rejections, with respect to commonly assigned 10/446,013, based on a nonstatutory double patenting ground.

Statement of Common Ownership

The subject matter of the cited co-pending Application No. 10/446,013 and the claimed invention of the present application No. 10/686,825 were, at the time the invention was made, owned by the assignee Eastman Kodak.

Based on this statement, the rejection under 35 U.S.C. §103 (a), in paragraph 5 of the Office Action, is believed obviated, as indicated by the Examiner.

A new declaration of inventorship is herewith submitted to correct the defective declaration.

Claim 1 has been amended to provide that the ink composition is a solvent based ink comprising more than 60 % of an organic solvent. Support for this amendment is found at page 2, lines 9-13, of the current specification. Accordingly, Claim 8 has been cancelled. Claim 1 has also been amended to recite that the colorant phase comprises pigment, as supported by original claim 3. Accordingly claim 3 has been canceled.

New Claim 15 has been added which is a combination of the limitations of claims 1 and claim 2, with the addition of a limitation reciting that initiator is first added "before introducing a monomer mixture used to form the polymer phase." Support for the latter language is to be found essentially verbatim in page 3, lines 16-19, of the original specification.

Claims 1-14 were rejected under 35 U.S.C. §102(e) as being anticipated by Wang et al. (U.S. 6,635,693). Claims 1-14 were also rejected under 35 U.S.C. §102(e) as being anticipated by Wang et al. (U.S. 2003/0199614).

Applicants respectfully submit that the current claims, as amended, require that the ink composition is a solvent based ink comprising over 60 % of an organic solvent. Both of the Wang references are directed to an water based ink and do not disclose or suggest the solvent based inks of the amended claims. These two types of ink compositions are very different in terms of physical and chemical properties, which cannot be predicted without experimental testing, and are generally utilized for different types of printing. Therefore the current invention cannot be anticipated by these references.

Claims 1-10 and 14 have been rejected under 35 U.S.C. §102(b) as being anticipated by Lin taken in view of the evidence given in Noguchi et al. and Kovacs et al. Claims 1-2 and 8-10 have also been rejected under 35 U.S.C. §102(b) as being anticipated by Shintani et al. Also, Claims 1-14 have been rejected under 35 U.S.C. §102(b) as being anticipated by EP 1006161. Finally, Claims 1-2 and 5-11 have been rejected under 35 U.S.C. §102(b) as being anticipated by Idogawa et al.

Applicants respectfully traverse these rejections. The current claims, as amended, require that the ink composition is a solvent based ink comprising over 60 % of an organic solvent. All of the above noted main references are directed to an water based ink and do not disclose or suggest the solvent based inks of the amended claims. These two different kinds of ink compositions, solvent based and water based, are very different and are generally utilized for different types of printing. Therefore the current invention cannot be anticipated by these references.

Before discussing the eight Section 103 rejections of paragraphs 17, 18, 19, 20, 21, 22, 23, and 24 in the Office Action, Applicants note that only the two Section 103 rejections of paragraphs 20 and 22 involve a rejection of independent Claim 1 of the present application, wherein Claim 1 and New Claim 15, which contains all the limitations of Claim 1, are the sole independent claims in the application. The latter two rejections involve Idogawa and Lin as the primary references, which Applicants conclude is believed by the Examiner to be

the closest prior art. Applicants will, therefore, begin by discussing these two references.

In paragraph 20 of the Office Action, Claims 1-2 and 5-11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Idogawa. The Examiner states that Idogawa discloses inkjet ink comprising water and 10-80% solvent, and 3-30 percent composite polymer particles obtained by polymerizing at least one vinyl monomer in the presence of colorant in situ. The Examiner states, it "would have been obvious to one of ordinary skill in the art to use composite colorant polymer particle in Idogawa et al. with mean particle size, including that presently claimed, in order to produce ink that will not clog the printer nozzles, and thereby arrive at the claimed invention."

Applicants respectfully traverse this rejection for the following reasons. Applicants take the position that Idogawa is a "water based ink composition" as stated in the title, abstract, and claims of the patent. In fact, the examples representing the invention are 75 percent water. Furthermore, Idogawa is directed to a colorant that is a hydrophobic dye, in which the hydrophobic dye is mixed with a monomer, then an initiator, resulting in a dye tangled with polymer. As noted above, the present claims are directed to a solvent based, pigment based ink composition. Furthermore, new Claim 15 requires addition of initiator before introducing monomer.

In view thereof, it follows that the subject matter of the claims would not have been obvious over Idogawa at the time the invention was made.

In paragraph 22 of the Office Action, Claims 1-10 and 14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Lin in view of Noguchi et al. and Kovacs et al. The Examiner states that Lin discloses ink jet ink comprising 0.1 to 50% solvent and composite colorant polymer particles, i.e. modified pigment particle, obtained by polymerizing at least one monomer in the presence of the colorant in situ. The Examiner notes that Lin discloses producing the modified pigment particle by addition of aqueous initiator to pigment dispersion which is then added to monomer/initiator mixture. The Examiner states, it "would have been obvious to one of ordinary skill in the art to use composite colorant polymer particle in Lin with mean particle size, including that

presently claimed, in order to produce ink that will not clog the printer nozzles, and thereby arrive at the claimed invention.”

This rejection is respectfully traversed. First, Lin is clearly directed to a water based ink, in contrast to a solvent based ink. Hence, the clogging mentioned by the Examiner which applies to water based ink would not be relevant to a solvent based ink, as would be appreciated by the skilled artisan, who would consider the teaching of Lin to be remote to the problems of a solvent based ink. Lin states, in col. 5, lines 29-31, that an object of his invention is “to provide an ink composition wherein pigment particles are stably dispersed in an aqueous medium.” With respect to claim 2 and new Claim 15, and contrary to the Examiner’s suggestion, Lin does not disclose or teach producing the modified pigment particle by adding aqueous initiator to pigment dispersion before any monomer is introduced. In point of fact, Lin teaches adding sodium para-stryrene sulfonate salt to the pigment dispersion early on, before any initiator is added.

Furthermore, the sodium para-stryrene sulfonate salt used by Lin results in a hydrophilic polymer. While this might be useful in a water based ink, it would not be used in the present invention, in which a hydrophobic polymer, comprising mostly hydrophobic monomers is used.

With respect to the secondary references, Noguchi et al. and Kovacs et al., Applicants are not relying on the particular pigments recited in dependent claim 4 for patentability.

In view thereof, it follows that the subject matter of the claims would not have been obvious over Lin in view of Noguchi et al. and Kovacs et al. at the time the invention was made.

Now returning to the order of Section 103 rejections in the Office Action, beginning in paragraph 17 of the Office Action, Claims 5-6 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Shintani et al. (U.S. 4,623,659) in view EP 1006161.

Applicants respectfully traverse this rejection. Applicants’ invention is directed to a solvent based ink wherein Shintani and EP 1006161 are both directed to an water based ink. As noted above these two types of inks are very different and are generally used in different types of printing. There is no

reason to believe that the components of a water based ink would translate well to a solvent based ink. Therefore the current invention is not obvious over the combination of Shintani and EP 1006161. Furthermore, claims 5-6 are patentable for the reason that they depend from claim 1, for the reasons stated above with respect to rejections in view of Lin and Idogawa.

Claim 11 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Lin (U.S. 5,281,261) or Shintani et al. (U.S. 4,623,659) either of which in view of Miyabayashi et al. (U.S. 6,271,285).

Applicants respectfully traverse this rejection. Applicants' invention is directed to a solvent based ink wherein Lin, Shintani and Miyabayashi are all directed to water based inks. Therefore the current invention is not obvious over Lin or Shintani in view of Miyabayashi. Furthermore, claim 11 is patentable for the reason that they depend from claim 1, for the reasons stated above with respect to rejections in view of Lin and Idogawa.

In paragraphs 19, 21, and 24, Claims 12-13 have been rejected. First, claims 12-13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Lin (U.S. 5,281,261), Idogawa et al. (U.S. 5,965,634) or Shintani et al. (U.S. 4,623,659) any of which in view of Tabayashi et al. (U.S. 6,074,467). Going temporarily out of order with the Office Action, Claims 12-13 have also been rejected under 35 U.S.C. §103(a) as being unpatentable over Idogawa et al. as applied to claims 1-2 and 5-11 above, and further in view of Tabayashi et al. In addition, Claims 12-13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Lin in view of Noguchi et al. and Kovacs et al. as applied to claims 1-10 and 14 above, and further in view of Tabayashi et al. With respect to the first of these three rejections, the Examiner states, it "would have been obvious to one of ordinary skill in the art to use such polymer in the composite colorant polymer particles of Idogawa et al. in order to produce ink which has good waterfastness, and thereby arrive at the claimed invention."

Applicants respectfully traverse these rejections. Applicants' invention is directed to a solvent based ink wherein Lin, Idogawa, Shintani and Tabayashi, and Noguchi et al. are all directed to water based inks. Kovacs et al. is directed to a hot melt ink. Therefore the current invention is not obvious in view

of Lin, Idogawa or Shintani in view of Tabayashi, nor obvious over Lin in view of Noguchi et al. and Kovacs et al. Furthermore, Claims 12-13 are patentable for the reason that they depend from claim 1, for the reasons stated above with respect to the first rejections involving Lin and Idogawa.

With respect to para. 23 of the Office Action, Claim 11 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Lin in view of Noguchi et al. and Kovacs et al. as applied to claims 1-10 and 14 above, and further in view of Miyabayashi et al. The Examiner states, it "would have been obvious to one of ordinary skill in the art to use such polymer in the composite colorant polymer particles of Lin in order to produce ink which is stably ejected from printer, and thereby arrive at the claimed invention."

Applicants take the position that Applicants' invention is directed to a solvent based ink wherein Lin, Noguchi et al., Kovacs, and Miyabayashi are all directed to water based inks. Furthermore, claim 11 is patentable for the reason that they depend from claim 1, for the reasons stated above with respect to the first rejections involving Lin and Idogawa.

In view thereof, it follows that the subject matter of the claims would not have been obvious over Lin in view of Noguchi et al. and Kovacs et al., and further in view of Miyabayashi et al. at the time the invention was made.

The Examiner has commented on Comparative Example 3, which was added by Applicants, as mentioned in the preliminary amendment filed 10/16/03, to show the advantage of solvent based inkjet ink over aqueous inkjet ink. The Examiner notes that it is not clear how the dispersion of comparative example C-3 is utilized. The Examiner asks whether dispersion C-3 is added to water. The Examiner also states that there is no proper side-by-side comparison. The Examiner states that since dispersion C-3 does not contain any solvent, there is no disclosure of adding initiator to the pigment dispersion before adding the monomer/initiator mixture when preparing the composite polymer particle.

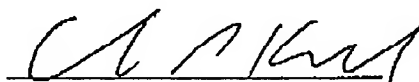
Applicants apologize for any confusion in the presentation of the Comparative Example C-3. In view of the above remarks, it is

submitted that Example C-3 is not necessary for patentability, although Applicants reserve the right to submit further comparisons by Declaration if desired.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



Attorney for Applicant(s)
Registration No. 30,721

Chris P. Konnkol/clb
Rochester, NY 14650
Telephone: 585-722-0452
Facsimile: 585-477-1148

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.